

(3) One hundred percent by the end of calendar year 1998.

**§ 234.269 Cut-out circuits.**

Each cut-out circuit shall be tested at least once every three months to determine that the circuit functions as intended. For purposes of this section, a cut-out circuit is any circuit which overrides the operation of automatic warning systems. This includes both switch cut-out circuits and devices which enable personnel to manually override the operation of automatic warning systems.

**§ 234.271 Insulated rail joints, bond wires, and track connections.**

Insulated rail joints, bond wires, and track connections shall be inspected at least once every three months.

**§ 234.273 Results of inspections and tests.**

(a) Results of inspections and tests made in compliance with this part shall be recorded on forms provided by the railroad, or by electronic means, subject to approval by the Associate Administrator for Safety. Each record shall show the name of the railroad, AAR/DOT inventory number, place and date, equipment tested, results of tests, repairs, replacements, adjustments made, and condition in which the apparatus was left.

(b) Each record shall be signed or electronically coded by the employee making the test and shall be filed in the office of a supervisory official having jurisdiction. Records required to be kept shall be made available to FRA as provided by 49 U.S.C. 20107 (formerly § 208 of the Federal Railroad Safety Act of 1970 (45 U.S.C. 437)).

(c) Each record shall be retained until the next record for that test is filed but in no case for less than one year from the date of the test.

REQUIREMENTS FOR PROCESSOR-BASED SYSTEMS

**§ 234.275 Processor-based systems.**

(a) *Applicable definitions.* The definitions in § 236.903 of this chapter shall apply to this section, where applicable.

(b) *Use of performance standard authorized or required.*

(1) In lieu of compliance with the requirements of this subpart, a railroad may elect to qualify an existing processor-based product under part 236, subpart H of this chapter.

(2) Highway-rail grade crossing warning systems, subsystems, or components that are processor-based and that are first placed in service after June 6, 2005, which contain new or novel technology, or which provide safety-critical data to a railroad signal or train control system that is governed by part 236, subpart H of this chapter, shall also comply with those requirements. New or novel technology refers to a technology not previously recognized for use as of March 7, 2005.

(3) Products designed in accordance with subparts A through D of this part, which are not in service but are in the developmental stage prior to December 5, 2005 (or for which a request for exclusion was submitted prior to June 6, 2005 pursuant to § 236.911 of this chapter), may be excluded from the requirements of part 236, subpart H of this chapter upon notification to FRA by March 6, 2006, if placed in service by December 5, 2008 (or March 7, 2008 for those products for which a request for exclusion was submitted to FRA prior to June 6, 2005). Railroads may continue to implement and use these products and components from these existing products. A railroad may at any time elect to have products that are excluded made subject to 49 CFR part 236, subpart H, by submitting a Product Safety Plan as prescribed in § 236.913 of this chapter and otherwise complying with part 236, subpart H of this chapter.

(c) *Product safety plan justifications.* The Product Safety Plan (see § 236.903 of this chapter) must explain how the performance objective sought to be addressed by each of the particular requirements of this subpart is met by the product, why the objective is not relevant to the product's design, or how safety requirements are satisfied using alternative means. Deviation from those particular requirements is authorized if an adequate explanation is provided, making reference to relevant elements of the Product Safety Plan, and if the product satisfies the performance standard set forth in

§ 236.909 of this chapter. (See § 236.907(a)(14) of this chapter.)

(d) *Specific requirements.* The following exclusions from the latitude provided by this section apply:

(1) Nothing in this section authorizes deviation from applicable design requirements for automated warning devices at highway-rail grade crossings in the Manual on Uniform Traffic Control Devices (MUTCD), 2000 Millennium Edition, Federal Highway Administration (FHWA), dated December 18, 2000, including Errata #1 to MUTCD 2000 Millennium Edition dated June 14, 2001 (<http://mutcd.fhwa.dot.gov/>).

(2) Nothing in this section authorizes deviation from the following requirements of this subpart:

- (i) § 234.207(b) (Adjustment, repair, or replacement of a component);
- (ii) § 234.209(b) (Interference with normal functioning of system);
- (iii) § 234.211 (Security of warning system apparatus);
- (iv) § 234.217 (Flashing light units);
- (v) § 234.219 (Gate arm lights and light cable);
- (vi) § 234.221 (Lamp voltage);
- (vii) § 234.223 (Gate arm);
- (viii) § 234.225 (Activation of warning system);
- (ix) § 234.227 (Train detection apparatus)—if a train detection circuit is employed to determine the train's presence;

(x) § 234.229 (Shunting sensitivity)—if a conventional track circuit is employed;

(xi) § 234.231 (Fouling wires)—if a conventional train detection circuit is employed;

(xii) § 234.233 (Rail joints)—if a track circuit is employed;

(xiii) § 234.235 (Insulated rail joints)—if a track circuit is employed;

(xiv) § 234.237 (Reverse switch cut-out circuit); or

(xv) § 234.245 (Signs).

(e) *Separate justification for other than fail-safe design.* Deviation from the requirement of § 234.203 (Control circuits) that circuits be designed on a fail-safe principle must be separately justified at the component, subsystem, and system level using the criteria of § 236.909 of this chapter.

(f) *Software management control for certain systems not subject to a performance standard.* Any processor-based system, subsystem, or component subject to this part, which is not subject to the requirements of part 236, subpart H of this chapter but which provides safety-critical data to a signal or train control system shall be included in the software management control plan requirements as specified in § 236.18 of this chapter.

[70 FR 72384, Dec. 5, 2005]

#### APPENDIX A TO PART 234—SCHEDULE OF CIVIL PENALTIES<sup>1</sup>

Section	Violation	Willful violation
<b>Subpart B—Reports</b>		
234.7 Accidents involving grade crossing signal failure .....	\$5,000	\$7,500
234.9 Grade crossing signal system failure reports .....	2,500	5,000
<b>Subpart C—Response to Reports of Warning System Malfunction</b>		
Sec.		
234.101 Employee notification rules .....	2,500	5,000
234.103 Timely response to report of malfunction .....	2,500	5,000
234.105 Activation failure		
(a) Failure to notify—train crews .....	5,000	7,500
Other railroads .....	5,000	7,500
(b) Failure to notify law enforcement agency .....	2,500	5,000
(c) Failure to comply with—flagging requirements .....	5,000	5,000
Speed restrictions .....	5,000	7,500
(d) Failure to activate horn or whistle .....	5,000	7,500
234.106 Partial activation		
(a) Failure to notify—train crews .....	5,000	7,500
Other railroads .....	5,000	7,500
(b) Failure to notify law enforcement agency .....	2,500	5,000
(c) Failure to comply with—flagging requirements speed restrictions .....	5,000	7,500
(d) Failure to activate horn or whistle .....	5,000	7,500

## Federal Railroad Administration, DOT

## Pt. 234, App. B

Section	Violation	Willful violation
234.107 False activation		
(a) Failure to notify—train crews .....	5,000	7,500
Other railroads .....	5,000	7,500
(b) Failure to notify law enforcement agency .....	2,500	5,000
(c) Failure to comply with—flagging requirements .....	5,000	7,500
Speed restrictions .....	5,000	7,500
(d) Failure to activate horn or whistle .....	5,000	7,500
234.109 Recordkeeping .....	1,000	2,000
<b>Subpart D—Maintenance, Inspection, and Testing</b>		
Maintenance Standards:		
234.201 Location of plans .....	1,000	2,000
234.203 Control circuits .....	1,000	2,000
234.205 Operating characteristics of warning system apparatus .....	2,500	5,000
234.207 Adjustment, repair, or replacement of component .....	2,500	5,000
234.209 Interference with normal functioning of system .....	5,000	7,500
234.211 Locking of warning system apparatus .....	1,000	2,000
234.213 Grounds .....	1,000	2,000
234.215 Standby power system .....	5,000	7,500
234.217 Flashing light units .....	1,000	2,000
234.219 Gate arm lights and light cable .....	1,000	2,000
234.221 Lamp voltage .....	1,000	2,000
234.223 Gate arm .....	1,000	2,000
234.225 Activation of warning system .....	5,000	7,500
234.227 Train detection apparatus .....	2,500	5,000
234.229 Shunting sensitivity .....	2,500	5,000
234.231 Fouling wires .....	1,000	2,000
234.233 Rail joints .....	1,000	2,000
234.235 Insulated rail joints .....	1,000	2,000
234.237 Switch equipped with circuit controller .....	1,000	2,000
234.239 Tagging of wires and interference of wires or tags with signal apparatus .....	1,000	2,000
234.241 Protection of insulated wire; splice in underground wire .....	1,000	2,000
234.243 Wire on pole line and aerial cable .....	1,000	2,000
234.245 Signs .....	1,000	2,000
Inspections and Tests:		
234.247 Purpose of inspections and tests; removal from service of relay or device failing to meet test requirements .....	2,500	5,000
234.249 Ground tests .....	2,500	5,000
234.251 Standby power .....	5,000	7,500
234.253 Flashing light units and lamp voltage .....	1,000	2,000
234.255 Gate arm and gate mechanism .....	1,000	2,000
234.257 Warning system operation .....	2,500	5,000
234.259 Warning time .....	1,000	2,000
234.261 Highway traffic signal pre-emption .....	1,000	2,000
234.263 Relays .....	1,000	2,000
234.265 Timing relays and timing devices .....	1,000	2,000
234.267 Insulation resistance tests, wires in trunking and cables .....	2,500	5,000
234.269 Cut-out circuits .....	1,000	2,000
234.271 Insulated rail joints, bond wires, and track connections .....	2,500	5,000
234.273 Results of tests .....	1,000	2,000
234.275 Processor-Based Systems .....	\$5,000	\$7,500

<sup>1</sup> A penalty may be assessed against an individual only for a willful violation. The Administrator reserves the right to assess a penalty of up to \$27,000 for any violation where circumstances warrant. See 49 CFR Part 209, Appendix A.

[61 FR 31806, June 20, 1996, as amended at 63 FR 11623, Mar. 10, 1998; 69 FR 30595, May 28, 2004; 70 FR 11094, Mar. 7, 2005]

APPENDIX B TO PART 234—ALTERNATE METHODS OF PROTECTION UNDER 49 CFR  
234.105(C), 234.106, AND 234.107(C)

[This is a summary—see body of text for complete requirements]

	Flagger for each direction of traffic	Police officer present	Flagger present, but not one for each direction of traffic	No flagger/no police
False Activation .....	Normal Speed .....	Normal Speed .....	Proceed with caution—maximum speed of 15 mph.	Proceed with caution—maximum speed of 15 mph.
Partial Activation* ...	Normal Speed .....	Normal Speed .....	Proceed with caution—maximum speed of 15 mph.	Proceed with caution—maximum speed of 15 mph.
Activation Failure**	Normal Speed .....	Normal Speed .....	Proceed with caution—maximum speed of 15 mph.	Stop: Crewmember flag traffic and reboard.

\*Partial activation—full warning not given.

Non-gated crossing with one pair of lights designed to flash alternatively, one light does not work (and back-lights from other side not visible).

Gated crossing—gate arm not horizontal; or any portion of a gate arm is missing if that portion had held a gate arm flashing light.

\*\*Activation failure includes—if more than 50% of the flashing lights on any approach lane not functioning; or if an approach lane has two or more pairs of flashing lights, there is not at least one pair operating as intended.

## **PART 235—INSTRUCTIONS GOVERNING APPLICATIONS FOR APPROVAL OF A DISCONTINUANCE OR MATERIAL MODIFICATION OF A SIGNAL SYSTEM OR RELIEF FROM THE REQUIREMENTS OF PART 236**

Sec.

235.1 Scope.

235.3 Application.

235.5 Changes requiring filing of application.

235.7 Changes not requiring filing of application.

235.8 Relief from the requirements of part 236 of this title.

235.9 Civil penalty.

235.10 Contents of application.

235.12 Additional required information-prints.

235.13 Filing procedure.

235.14 Notice.

235.20 Protests.

APPENDIX A TO PART 235—SCHEDULE OF CIVIL PENALTIES

AUTHORITY: 49 U.S.C. 20103, 20107; 28 U.S.C. 2461, note; and 49 CFR 1.49.

SOURCE: 49 FR 3380, Jan. 26, 1984, unless otherwise noted.

### **§ 235.1 Scope.**

This part prescribes application for approval to discontinue or materially modify block signal systems, interlockings, traffic control systems, automatic train stop, train control, or cab signal systems, or other similar appliances, devices, methods, or systems, and provides for relief from part 236 of this title.

### **§ 235.3 Application.**

(a) Except as provided in paragraph (b) of this section, this part applies to railroads that operate on standard gage track which is part of the general railroad system of transportation.

(b) This part does not apply to rail rapid transit operations conducted over track that is used exclusively for that purpose and that is not part of the general system of railroad transportation.

### **§ 235.5 Changes requiring filing of application.**

(a) Except as provided in § 235.7, applications shall be filed to cover the following:

(1) The discontinuance of a block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system or other similar appliance or device;

(2) The decrease of the limits of a block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system;

(3) The modification of a block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system.

(b) [Reserved]

(Approved by the Office of Management and Budget under control number 2130-0042)

### **§ 235.7 Changes not requiring filing of application.**

(a) It is not necessary to file an application for approval of the following discontinuances:

(1) Removal of block signal system, interlocking, traffic control system, automatic train stop, train control, or cab signal system from track approved for abandonment by formal proceeding;

(2) Removal of devices and associated signals used to provide protection against unusual contingencies such as landslide, burned bridge, high water, high and wide load, or tunnel protection when the unusual contingency no longer exists;

(3) Removal of an interlocking where a drawbridge has been permanently closed by the formal approval of another government agency; or

(4) Removal from service not to exceed six months of block signal system, interlocking, or traffic control system necessitated by catastrophic occurrence such as derailment, flood, fire, or hurricane.

(b) When the resultant arrangement will comply with part 236 of this title, it is not necessary to file for approval